

CLAIMS

What is claimed is:

1. A mobile communications system, in which a core network provides wireless service to a plurality of mobile units, and at least one local network provides communication with ones of the mobile units, the system comprising:

a database, accessible by the core network, which includes data concerning the local network provider and geographic coverage of the local network provider; and

a position comparison device to identify a position of at least one mobile unit and to correlate the geographic coverage with a position of said one mobile unit and provide information concerning the correlation to a user of said one mobile unit, said one mobile unit able to communicate with said core network and said one local network.

2. The mobile communications system of claim 1, wherein the position identification function includes accepting signals from a GPS position locator associated with said one mobile unit.

3. The mobile communications system of claim 1, wherein the position identification function includes using network based location using signal calculations derived from communications with said one mobile unit.

4. The mobile communications system of claim 1, wherein the position identification function includes at least one of AOA (angle of arrival), TDOA (time difference of arrival) or GPS.

5. The mobile communications system of claim 1, wherein the position identification function is provided by a hybrid system using GPS position locator associated with said one mobile unit, and network based location.

6. The mobile communications system of claim 1, wherein the core network is a digital cellular communications network capable of communicating with the mobile units and the local network is a WLAN capable of communicating with the mobile units.

7. The mobile communications system of claim 1, further comprising a circuit function whereby the WLAN interacts with the core network to provide the core network with data concerning at coverage of the WLAN in the core network and services offered by the WLAN to the mobile units.

8. The mobile communications system of claim 1, wherein the WLAN interacts with the core network to provide the position of the mobile unit when served by the WLAN.

9. System for handover of a mobile unit between a cellular network and a wireless local area network (WLAN) comprising:

means for communicating between a WLAN and a cellular network;

means for communicating between the mobile unit and the cellular network;

means for communicating between the mobile unit and the WLAN;

means for determining the location of the mobile unit;

means for determining the coverage area of the WLAN;

means for informing the mobile unit of the existence of the WLAN when the mobile unit approaches the coverage area of the WLAN; and

means for handing over the mobile unit between the cellular network and the WLAN when the mobile unit is in the corresponding coverage area.

10. The system of claim 9 wherein the means for handing over provides a handoff from the cellular network to the WLAN when the mobile unit is in the coverage area of the WLAN.

11. The system of claim 9 wherein the means for handing over the mobile unit between the cellular network and the WLAN provides a handoff from the WLAN to the cellular network when the determined location of the mobile unit indicates the mobile unit leaving the coverage area of the WLAN.

12. The system of claim 9 further comprising means to provide data to the WTRU to indicate the availability of WLAN coverage and at least one further aspect of the WLAN coverage.

13. The system of claim 9 further comprising means to provide data to the WTRU to indicate the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising one of cost, speed of the network, and user services offered by the WLAN.

14. The system of claim 13 further comprising means to provide user acceptance of communication through the WLAN in response to the data indicating the availability of WLAN coverage and the further information.

15. The system of claim 9 further comprising:
means to provide data to the WTRU to indicate the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising one of cost, speed of the network, and user services offered by the WLAN; and

means to provide user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the

user may pre-select acceptance of communication through the WLAN according to the further information, prior to the receipt by the WTRU of the further information.

16. The system of claim 15 further comprising means to provide user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication with the cellular network, prior to handoff from the WLAN to the cellular network.

17. The system of claim 9 further comprising means to provide user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication with the cellular network, prior to handoff from the WLAN to the cellular network.

18. A wireless transmit and receive unit (WTRU) comprising:

a cellular network communication device for communicating with a cellular network and receiving information from the cellular network indicating a local network having a coverage area at a geolocation of the WTRU;

a handoff acceptance device for accepting a handing over of the WTRU from the cellular network to the local network after receiving the local network indicator information; and

a local network communication device for communicating with the local network after the WTRU is handed over to the local network.

19. The WTRU of claim 18 wherein the handoff acceptance device responds to a handoff from the cellular network to the WLAN when the WTRU has a geolocation in the coverage area of the WLAN.

20. The WTRU of claim 18 wherein the handoff acceptance device responds to a handoff from the WLAN to the cellular network when the determined location of the WTRU indicates the WTRU leaving the coverage area of the WLAN.

21. The WTRU of claim 18 further comprising a circuit to receive data indicating the availability of WLAN coverage and at least one further aspect of the WLAN coverage.

22. The WTRU of claim 18 further comprising a circuit to receive data indicating the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising one of cost, speed of the network, and user services offered by the WLAN.

23. The WTRU of claim 22 further comprising a circuit to provide user acceptance of communication through the WLAN in response to the data indicating the availability of WLAN coverage and the further information.

24. The WTRU of claim 18 further comprising:
a circuit to receive data indicating the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising one of cost, speed of the network, and user services offered by the WLAN;
and

a circuit to provide user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication through the WLAN according to the further information, prior to the receipt by the WTRU of the further information.

25. The WTRU of claim 24 further comprising a circuit to provide user selection of the WLAN in response to the data indicating the availability of WLAN

coverage and the further information, wherein the user may pre-select acceptance of communication with the cellular network, prior to handoff from the WLAN to the cellular network.

26. The WTRU of claim 18 further comprising a circuit to provide user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication with the cellular network, prior to handoff from the WLAN to the cellular network.

27. Method for handover of a mobile unit between a cellular network and a wireless local area network (WLAN) comprising:

- establishing communication between the WLAN a cellular network;
- determining the location of the mobile unit;
- determining the coverage area of the WLAN;
- informing the mobile unit of the existence of the WLAN when the mobile unit approaches the coverage area of the WLAN; and
- handing over the mobile unit between the cellular network and the WLAN when the mobile unit is in the corresponding coverage area.

28. The method of claim 27 wherein the handing over provides a handoff from the cellular network to the WLAN when the mobile unit is in the coverage area of the WLAN.

29. The method of claim 27 wherein the handing over the mobile unit between the cellular network and the WLAN provides a handoff from the WLAN to the cellular network when the determined location of the mobile unit indicates the mobile unit leaving the coverage area of the WLAN.

30. The method of claim 27 further comprising providing data to the WTRU to indicate the availability of WLAN coverage and at least one further aspect of the WLAN coverage.

31. The method of claim 27 further comprising providing data to the WTRU to indicate the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising one of cost, speed of the network, and user services offered by the WLAN.

32. The method of claim 31 further comprising providing user acceptance of communication through the WLAN in response to the data indicating the availability of WLAN coverage and the further information.

33. The method of claim 27, further comprising the WLAN interacting with the cellular network to provide the cellular network with data concerning coverage of at least one WLAN in the core network and services offered by said WLAN to the mobile units.

34. The method of claim 27 further comprising:
providing data to the WTRU to indicate the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising one of cost, speed of the network, and user services offered by the WLAN; and

providing user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication through the WLAN according to the further information, prior to the receipt by the WTRU of the further information.

35. The method of claim 34 further comprising providing user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication with the cellular network, prior to handoff from the WLAN to the cellular network.

36. The method of claim 27 further comprising providing user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication with the cellular network, prior to handoff from the WLAN to the cellular network.